Grundig

I3558/04
2570

GAMMA II\III SERVICE MANUAL

VW -TNR. 357 035 136 AUDI - TNR. 893 035 186

05/87

Mechanischer Teil

Bei Eingriffen Schutzmaßnahmen für **MOS** - Bausteine beachten!

Allgemeines
Zahlen im Text und bei den Abbildungen sind mit den Positionsnummern in der Ersatzteilliste identisch. Teile, die in der Ersatzteilliste nicht vorkommen,sind mit Buchstaben gekennzeichnet. Näher bezeichnete Hilfsmittel z.B. Schmiermittelsatz oder Testbandcassetten können von den Service - Stellen bezogen werden.

Gerät öffnen
Die beiden Deckel können mit einen Schraubendreher angehebelt und dann abgenommen werden.

Blende abnehmen
- Lautstärkeregierknopf abziehen
- 2 Einbaufedern abschrauben
- 2 Rastnasen **a** ausrasten und Blende nach vorne abziehen
- Steckverbindung von Blende abziehen

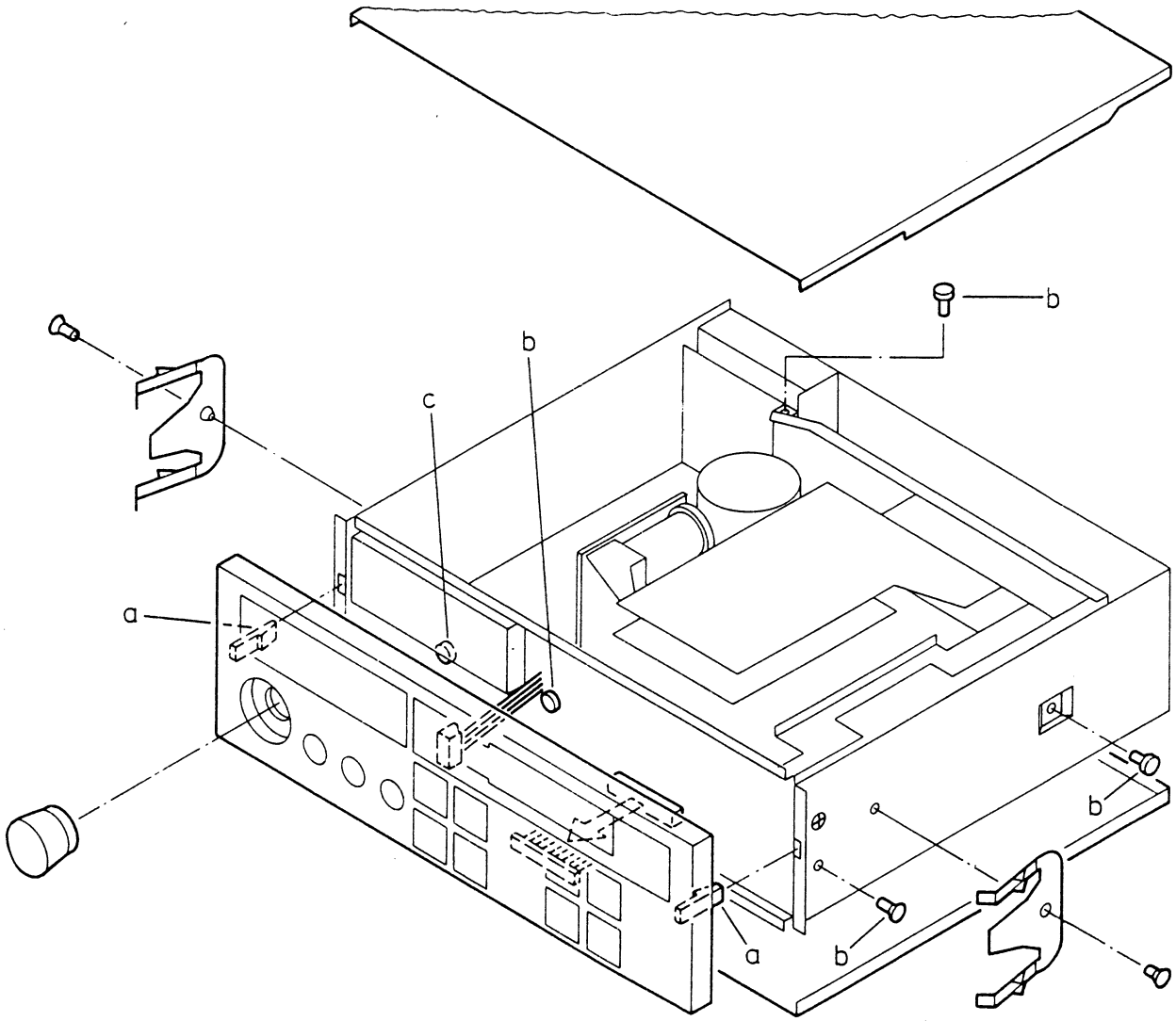
Mechanical Section

N.B. When carrying out repairs, observe MOS precautions!

Introduction
The figures in the text and in the diagrams are the corresponding position numbers in the spares list. Parts not included in the spares list are denoted by letters of the alphabet. Servicing aids such as lubrication kits and test tape cassettes which have been given detailed descriptions can be obtained from sales and service centres.

Opening the Unit
The top and bottom covers are lifted off with a screwdriver and can then be removed.

Removal of Front Panel
- Pull off the volume control knob.
- Unscrew 2 mounting springs.
- Unlock the 2 lugs **a** and pull out the panel to the front.
- Pull out the connector.



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Laufwerk ausbauen
- 4 Schrauben **b** herausschrauben
- Laufwerk nach oben herausnehmen
- Steckverbindungen abziehen

FM-Platte ausbauen
- Plattenabstandshalter herausnehmen
- Masseverbindung auflöten
- Platte nach oben herausziehen

Motor-Elektronik-Platte ausbauen
- Plattenabstandshalter herausnehmen
- Steckverbindungen abziehen
- Platte nach oben herausnehmen

Display ausbauen
- Schraube **c** herausschrauben
- Steckverbindung abziehen
- Display nach hinten herausnehmen

Kopfhöhe-Einstellung
- Testbandcassette einschieben (Best.- Nr. 72008-247.00)
- In Stellung " Start " mit den Schrauben **A** und **K** Kopf so einstellen, daß das Band nicht an den oberen bzw. unteren Kanten der Bandführungsgabeln umknickt

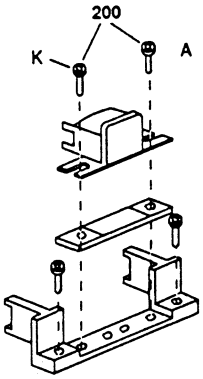
Disassembly of Drive Mechanism
- Undo 4 screws **b** .
- Lift the drive mechanism and take it out
- Pull out the connectors.

Disassembly of FM Circuit Board
- Remove the spacers of the board.
- Unsolder the ground connection to the aerial socket.
- Lift the board and take it out.

Disassembly of Motor Control Board
- Remove the spacers of the board.
- Pull out the connection.
- Lift the board and take it out.

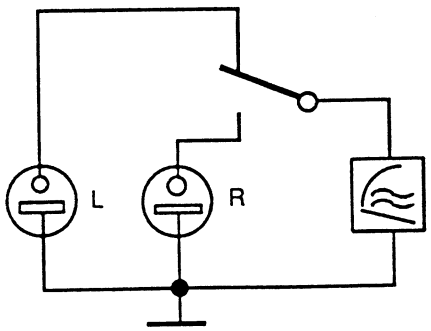
Disassembly of Display
- Undo screw **c**
- Pull out the connector.
- Take out the display to the back.

Head Height Adjustment
- Insert testcassette, Order No. 72008 - 247.00
- With " Start " selected, adjust head height with screws **A** and **K** so that the tape does not fold over at the top or bottom edge of the tape guides.



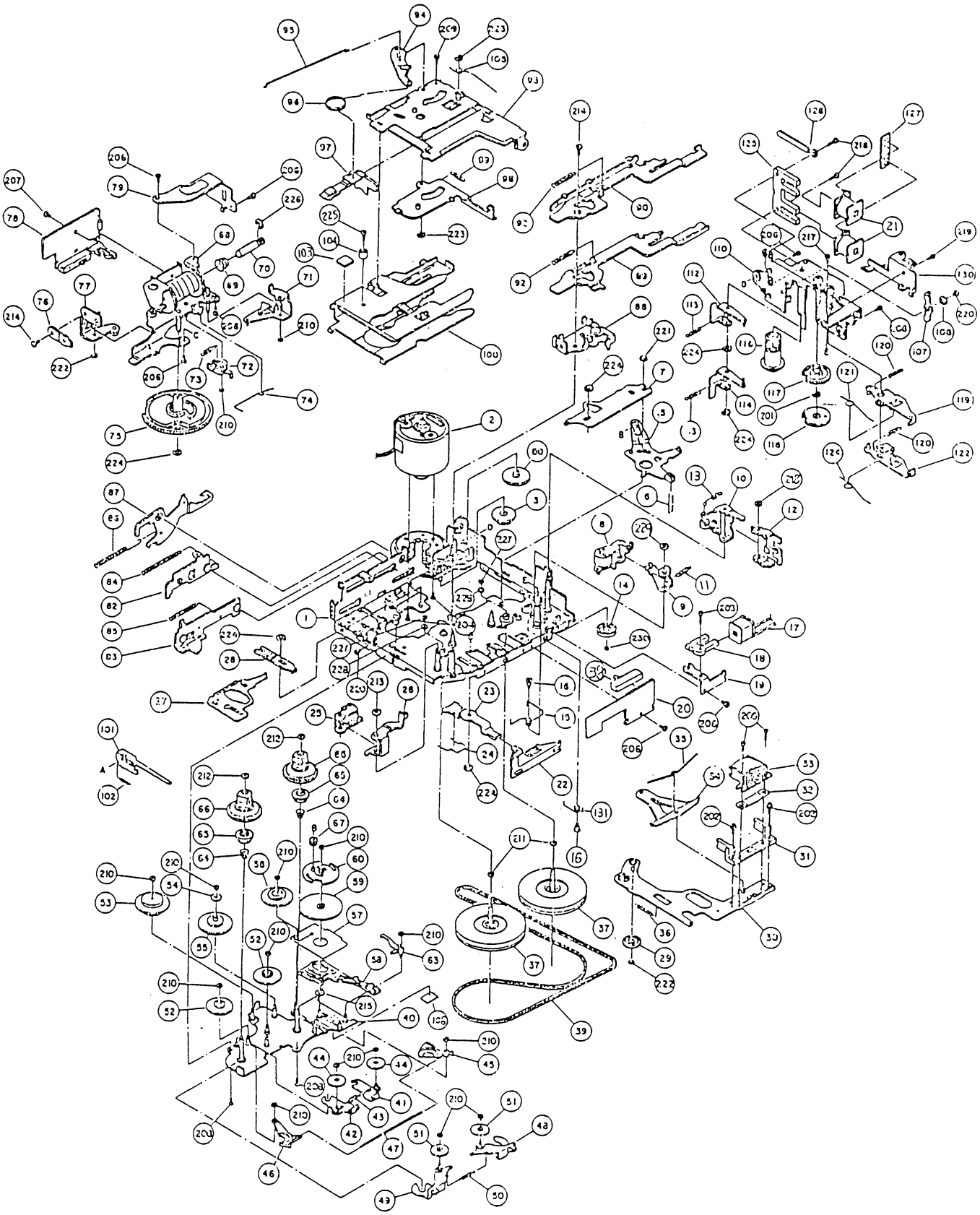
Azimut-Einstellung
Gemessen nach Abbildung
Die Justageschraube muß ölfrei sein und das Gewinde ist vor dem Einschrauben mit Pattex-Kleber einzustreichen.
- Testbandcassette 449 (10 kHz) abspielen (Best.-Nr.35079-019.00)
- Mit Justageschraube **A** Kopf so einstellen, daß sich ein maximaler Ausgangspegel ergibt (gemessen am rechten Kanal).
  Pegelunterschied zwischen linken und rechten Kanal darf maximal 4 dB betragen.

Azimuth Adjustment
Measured as in Fig.
The adjustment screw must be free of oil and its thread should be coated with Pattex adhesive before it is screwed in position.
- Play back test cassette 449 (10 kHz) Order No. 35079 - 019.00
- Adjust head with screw **A** for maximum output level (measured on right channel).
  The difference in level between the left - and right - hand channels must not exceed 4 dB.



Explosionszeichnung
TN 727 / AL

Explosion view
TN 727 / AL



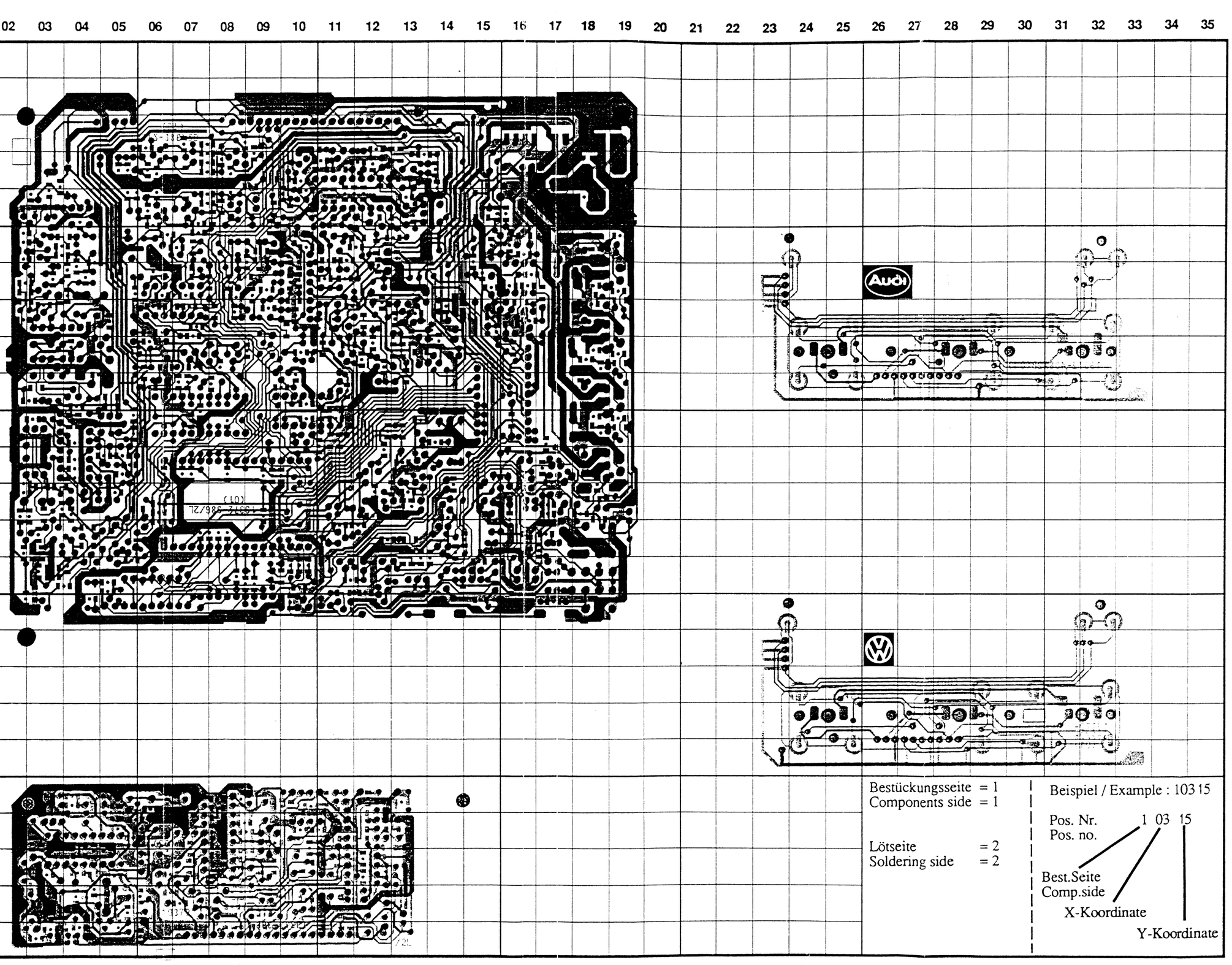
Ersatzteilliste
Spare Parts List
TN 727 / AL

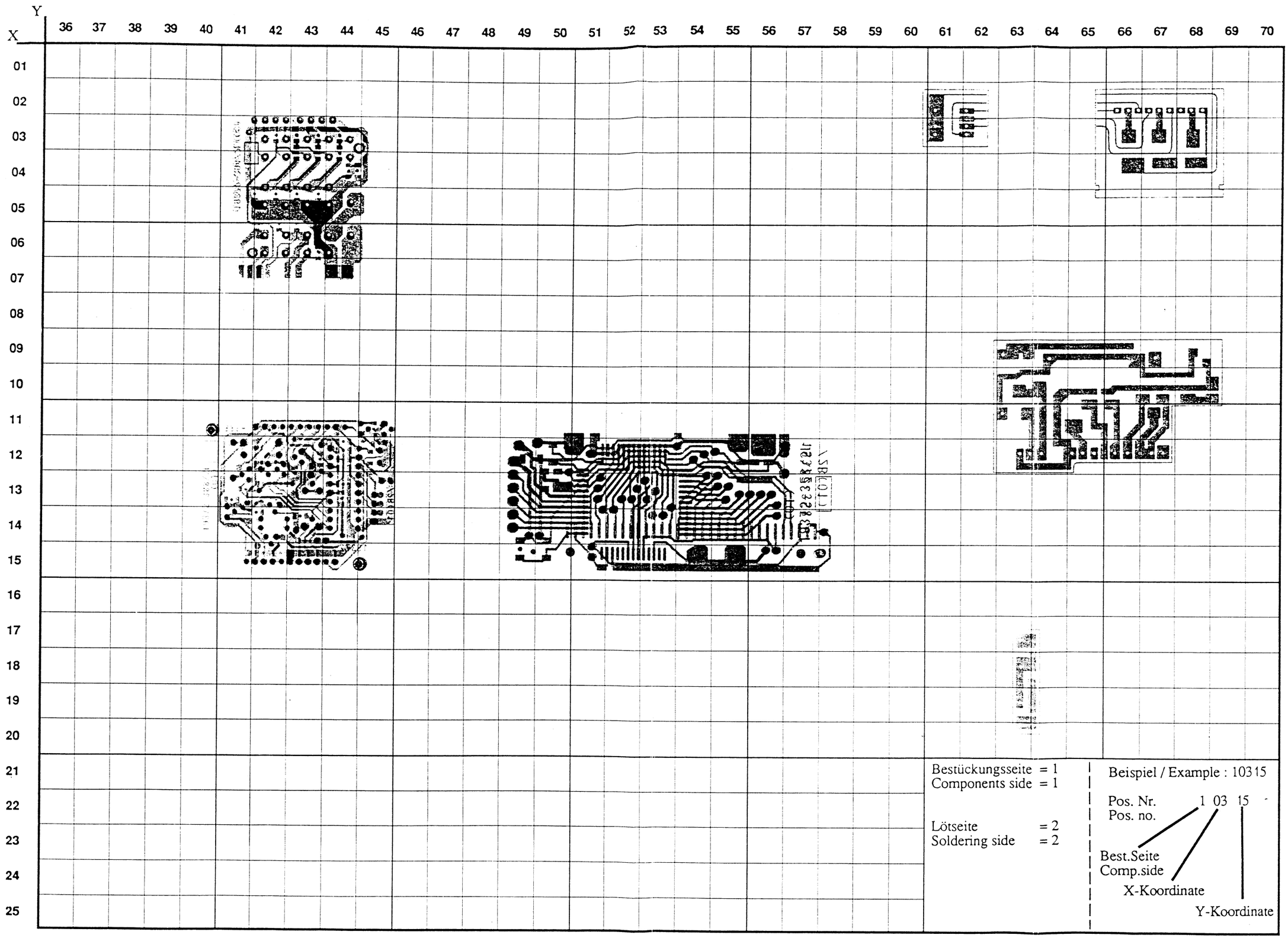
Pos. No.	Fig. No.	Bestell-Nr. Part No./Ref. Nr. d'ordinazioni	Benennung	Description	Désignation	Denominazione
2		72008-653.85	Motor kpl.	Motor cpl.	Moteur cpl.	Motore cpl.
3		72008-653.03	Hauptrad	Main wheel	Roue principale	Ruota principale
5		72008-651.76	Umlenkhebel	Pivoting lever	Pivot	Leva di rinvio
6		72008-651.21	Bügelfeder	Bracket spring	Ressort	Molla curva
7		72008-653.04	Lenkhebel	Lever	Levier	Leva
8		72008-653.86	Andruckrolle/Vorlauf vorward	Pressure roller/ avance	Rouleau de pression avvolgimento	Rullo premi nastro/
9		72008-653.87	Hebel/Andruckrolle	Lever/pressure roller	Levier/Rouleau de pression	Leva/ Rullo premi nastro
10		72008-653.88	Schnellrücklaufhebel	Fast rewind lever	Levier rebobinage	Riavvolgimento
11		72008-653.89	Zugfeder	Tension spring	Rossort a traction	Molla di trazione
12		72008-653.09	Schnellrücklauf-Lösehebel	Fast rewind-release lever	Levier detente retour	Leva sblocco riavv. vel.
13		72008-653.90	Zugfeder	Tension spring	Ressort a traction	Molla di trazione
14		72008-653.91	Rolle	Roller	Rouleaux	Rullino
15		72008-653.92	Kontrollfeder	Control spring	Ressort controle	Molla
16		72008-651.79	Schraube	Screw	Vis	Vite
17		72008-653.93	Spule	Coil	Bobine	Bobina
18		72008-653.94	Ferritkern	Ferrite core	Core de ferrite	Nucles in ferrite
20		72008-653.95	Platte m. Kopfleitung	Plate w. head leads	Platine avex liais. tete	Piastra con colleg. test.
21		72008-653.96	Platte m. Kopfspule	Plate with spol	Platine avec bobine	Piastra con bobina
22		72008-651.81	Rücklaufhebel	Rewind lever	Levier rebobinage	Leva riavvolgimento
23		72008-651.80	Rücklaufhebel	Rewind lever	Levier rebobinage	Leva riavvolgimento
24		72008-653.97	Bügelfeder	Bracket spring	Ressort	Molla curva
25		72008-653.98	Andruckrolle/ Reverse	Pressure roller/ inverse	Rouleau de press. reverse	Rullo premi-nastro/
26		72008-653.14	Zughebel	Tension lever	Levier	Leva
27		72008-651.83	Hebel	Lever	Levier	Leva
28		72008-651.82	Hebel	Lever	Levier	Leva
29		72008-653.15	Kopfhebelrad	Head lever drive wheel	Levier de tete	Ruota leva testina
31		72008-651.26	Bandführung	Tape guide	Guidage de bande	Guida nastro
32		72008-651.44	Abstandsblattfeder	Spacing leaf spring	Ressort d'ecart.	Molla piatta distanz.
33		72008-653.99	Magnetkopf	Magnetic head	Tete magnetique	Testina magnetica
34		72008-651.50	Schlitten	Cradle	Traineau	Slitta
35		72008-651.42	Andruckfeder	Pressure spring	Ressort de press.	Molla di pressione
36		72008-653.16	Zugfeder	Tension spring	Ressort a traction	Molla di trazione
37		72008-653.17	Schwungscheibe	Flywheel	Roue di inertie	Volano
38		72008-654.00	Schiebeschalter	Slider switch	Interr. a coulisse	Interruttore a cursore
39		72008-654.01	Antriebsriemen	Drive belt	Courroie motrice	Cinghia di trazione
41		72008-651.84	Schwenkhebel/ Vorlauf	Pivoted lever/ forward	Pivot/ avance	Leva/ avvolgimento

Pos. No.	Fig. No.	Bestell-Nr. Part No./Ref. Nr. d'ordinazioni		Benennung	Description	Désignation	Denominazione
42		72008-651.85		Schwenkhebel/ Rücklauf	Pivoted lever/ rewind	Pivot/ rembobinage	Leva/ riavvolgimento
43		72008-654.02		Zugfeder	Tension spring	Ressort a traction	Molla di trazione
44		72008-651.57	2x	Zahnrad	Gear wheel	Roue dentee	Ruota dentata
45		72008-653.20		Umlenkhebel/ Vorlauf	Pivoting lever/ forward	Pivot/ avance	Leva di rinvio/ avvolgimento
46		72008-653.21		Umlenkhebel/ Rücklauf	Pivoting lever/ rewind	Pivot/ rembobinage	Leva di rinvio/ riavvolgimento
47		72008-651.48		Stabfeder	Bar spring	Ressort tige	Molla a bastoncino
48		72008-651.87		Zahnradplatte/ Vorlauf	Gear board/ forward	Plaque d'engrenag./ avance	Piastra ruota dent./ avvolgimento
49		72008-651.88		Zahnradplatte/ Rücklauf	Gear board/ rewind	Plaque d'engrenag./ rembobinage	Piastra ruota dent./ riavvolgimento
50		72008-651.47		Zugfeder	Tension spring	Ressort a traction	Molla di trazione
51		72008-651.58	2x	Zahnrad	Gear wheel	Roue dentee	Ruota dentata
52		72008-654.03		Zahnrad	Gear wheel	Roue dentee	Ruota dentata
53		72008-654.04		Rücklaufkupplung	Rewind clutch	Embrayage de remb.	Frizione di riavvolgim.
54		72008-651.62		Zahnrad, oben	Gear wheel,upper	Roue dent./super.	Ruota dent./superiore
55		72008-651.61		Zahnrad, unten	Gear wheel, lower	Roue dent./infer.	Ruota dent./inferiore
56		72008-651.63		Zahnrad	Gear wheel	Roue dentee	Ruota dentata
57		72008-654.05		Abstandsplättchen	Spacer board	Entroise pallier	Piastra distanziatrice
58		72008-653.23		Zwischenhebel	Intermediate lever	Levier intermed.	Leva intermedia
59		72008-654.06		Rad	Wheel	Galet/pignon	Ruota
60		72008-651.65		Umschaltrad	Switch over wheel	Roue de commut.	Puleggia di commut.
61		72008-651.91		Stophebel	Stop lever	Levier stop	Leva di stop
62		72008-654.07		Zugfeder	Tension spring	Ressort a traction	Molla di trazione
63		72008-654.08		Hebel	Lever	Levier	Leva
64		72008-651.17	2x	Druckfeder	Compr. spring	Ress. a compress.	Molla di pressione
65		72008-651.18	2x	Lager	Bearing	Roulement	Boccola
66		72008-651.14	2x	Wickelteller	Spool carrier	Plateau de bobin.	Piattello avvolgente
67		72008-652.06		Buchse	Socket	Embase	Presa
68		72008-653.24		Magnethalter	Solenoid holder	Support	Supporto magnete
69		72008-653.25		Druckfeder	Compr. spring	Ressort a compr.	Molla di pressione
70		72008-653.26		Magnet	Solenoid	Aimant	Magnete
71		72008-653.27		Hebel	Lever	Levier	Leva
72		72008-654.09		Schalthebel	Switch lever	Levier de commut.	Leva di commut.
73		72008-653.29		Zugfeder	Tension spring	Ressort a traction	Molla di trazione
74		72008-653.30		Drehfeder	Torsion spring	Ressort a torsion	Molla di torsione
75		72008-653.31		Zahnrad	Gear wheel	Roue dentee	Ruota dentata
76		72008-653.32		Feder	Spring	Ressort	Molla
77		72008-653.33		Hebel	Lever	Levier	Leva
78		72008-654.10		Leiterplatte	P.C. board	Circuit imprimee	Piastra stampata
80		72008-653.36		Schaltrad	Switch wheel	Roue de commut.	Puleggia di commut.
81		72008-653.37		Schalter	Switch	Commutateur	Commutatore/interr.
82		72008-653.38		Hebel	Lever	Levier	Leva
83		72008-653.39		Auswurfhebel	Eject lever	Levier d'ejection	Leva espulsione
84		72008-651.35		Zugfeder	Tension spring	Ressort a traction	Molla di trazione
85		72008-653.40		Zugfeder	Tension spring	Ressort a traction	Molla di trazione
86		72008-651.37		Zugfeder	Tension spring	Ressort a traction	Molla di trazione
87		72008-653.41		Hebel	Lever	Levier	Leva
88		72008-654.11		Rücklaufhebel	Rewind lever	Levier rebobinage	Leva riavvolgimento
89		72008-654.12		Rücklaufhebel	Rewind lever	Levier rebobinage	Leva riavvolgimento
90		72008-654.13		Vorlaufhebel	Forward lever	Levier d'avance	Leva di avvolgimento
92		72008-651.32		Zugfeder	Tension spring	Ressort a traction	Molla di trazione
93		72008-654.14		Hubplatte	Lifting plate	Plateau de levage	Piastra di sollevam.

Pos. No.	Fig. No.	Bestell-Nr. Part No./Ref. Nr. d'ordinazioni		Benennung	Description	Désignation	Denominazione
94		72008-654.15		Hebel	Lever	Levier	Leva
95		72008-651.27		Stabfeder	Bar spring	Ressort tige	Molla a bastoncino
96		72008-654.16		Drehfeder	Torsion spring	Ressort a torsion	Molla di torsione
97		72008-653.45		Mitnahmehebel	Switch linkage lever	Levier d'entraines	Leva di trascinamento
98		72008-654.17		Platte	Plate	Plaque	Piastra
99		72008-651.30		Zugfeder	Tension spring	Ressort a traction	Molla di trazione
100		72008-651.54		Cassettenschacht	Cassette compartment	Compartinent cass.	Vano cassetta
101		72008-653.46		Hebel	Lever	Levier	Leva
102		72008-654.18		Feder	Spring	Ressort	Molla
104		72008-654.19		Buchse	Socket	Embase	Presa
105		72008-653.48		Drehfeder	Torsion spring	Ressort a torsion	Molla di torsione
107		72008-654.20		Umlenkung	Pivot	Piece de renvoi	Rinvio
108		72008-654.21		Abstandsscheibe	Spacer washer	Rondelle d'espace	Rondella distanziatore
110		72008-654.22		Zahnradhalter	Toothed wheel holder	Support pignon	Supporto ruota testina
112		72008-654.23		Spulenhebel/ Vorlauf	Spool lever forward	Levier bobine avance	Leva bobina avvolgimento
113		72008-654.24		Zugfeder	Tension spring	Ressort a traction	Molla di trazione
114		72008-654.25		Gelenkhebel/ Rücklauf	Articulated lever Rewind	Levier articule Rembobinage	Leva articolata Riavvolgimento
116		72008-654.26		Schaltrad	Switch wheel	Roue de commut.	Puleggia di commut.
117		72008-654.27		Zahnrad/Vorlauf	Gear wheel/forward	Roue dentee/avance	Ruota dentata/avvolg.
118		72008-654.28		Zahnrad/Rücklauf	Gear wheel/rewind	Roue dentee/rembob.	Ruota dentata/riavv.
119		72008-654.29		Lifthebel/ Vorlauf	Lifting lever forward	Levier ascenseur avance	Leva di sollevamento avvolgimento
120		72008-654.30		Zugfeder	Tension spring	Ressort a traction	Molla di trazione
121		72008-654.31		Lifthebel/ Zugfeder	Lifting lever Tension spring	Levier ascenseur Ressort a traction	Leva di sollevamento Molla di trazione
122		72008-654.32		Lifthebel/ Rücklauf	Lifting lever Rewind	Levier ascenseur Rembobinage	Riavvolgimento
124		72008-654.33		Drehfeder	Torsion spring	Ressort a torsion	Molla di torsione
125		72008-654.34		Spulenträger	Spool carrier	Porte-bobine	Supporto bobina
127		72008-654.35		Spulen-Leiterplatte	Spool - printed panel	C.I. bobines	Piastra stamp. bobina
130		72008-654.36		Hebel-Träger	Lever	Levier	Leva
131		72008-654.37		Schaltfeder	Switch spring	Ressort	Molla
200		72008-654.38	2x	Kopfschraube	Cap screw	Vis a tete	Vite testina
201		72008-654.39		SiRi	SiRi	SiRi	SiRi
216		72008-654.40		Schraube	Screw	Vis	Vita
217		72008-654.41		Schraube	Screw	Vis	Vita
223		72008-654.42		SiRi	SiRi	SiRi	SiRi
225		72008-654.43		Schraube	Screw	Vis	Vita
228		72008-654.44		Scheibe	Washer	Rondelle	Rondella
229		72008-654.45		Scheibe	Washer	Rondelle	Rondella

Gamma II/III - Scanning





Bestückungsseite = 1
Components side = 1

Lötseite = 2
Soldering side = 2

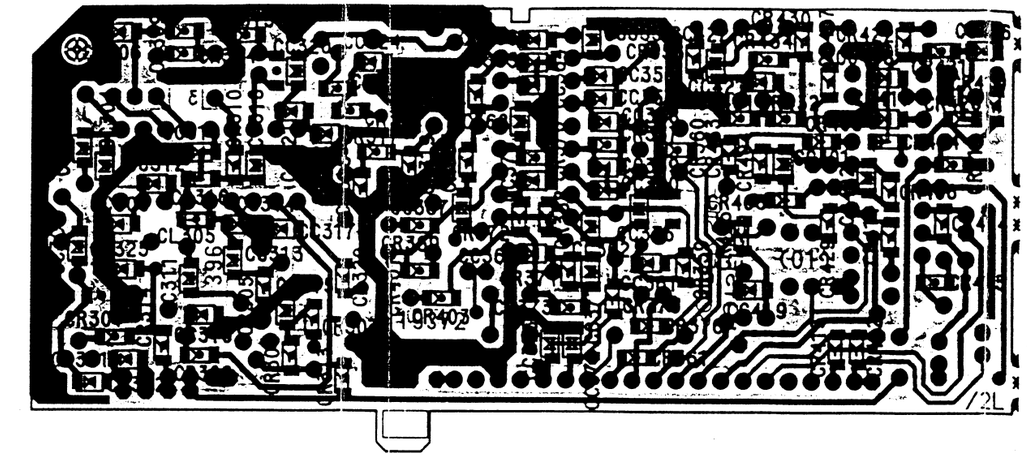
Beispiel / Example : 10315

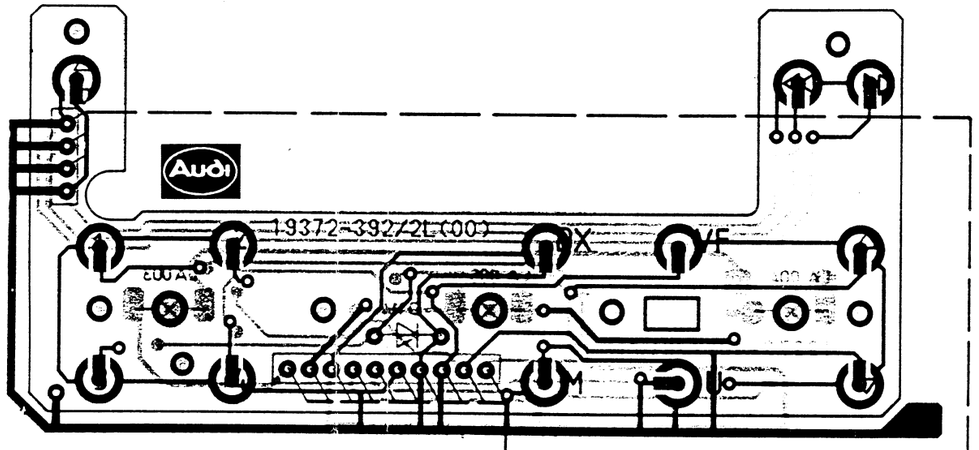
Pos. Nr. 1 03 15
Pos. no.

Best.Seite
Comp.side

X-Koordinate

Y-Koordinate

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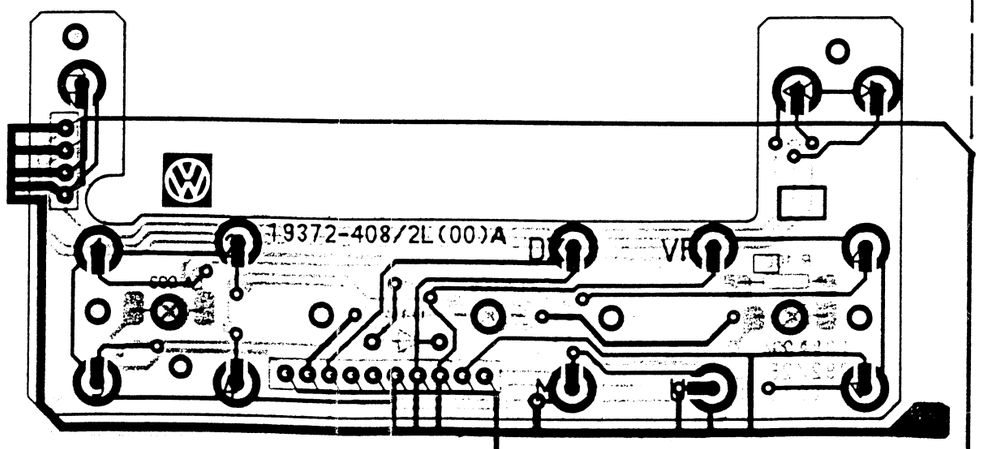
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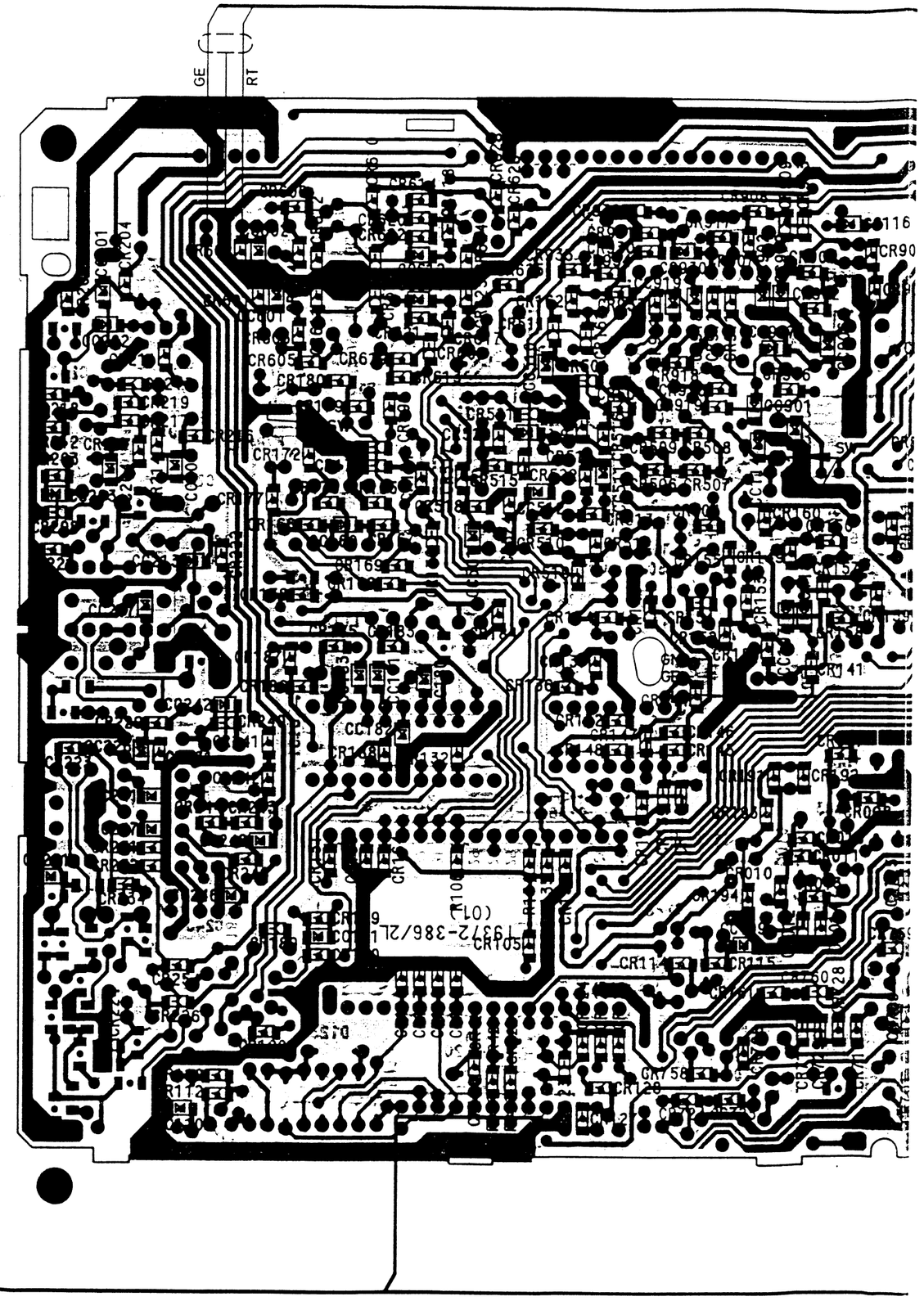
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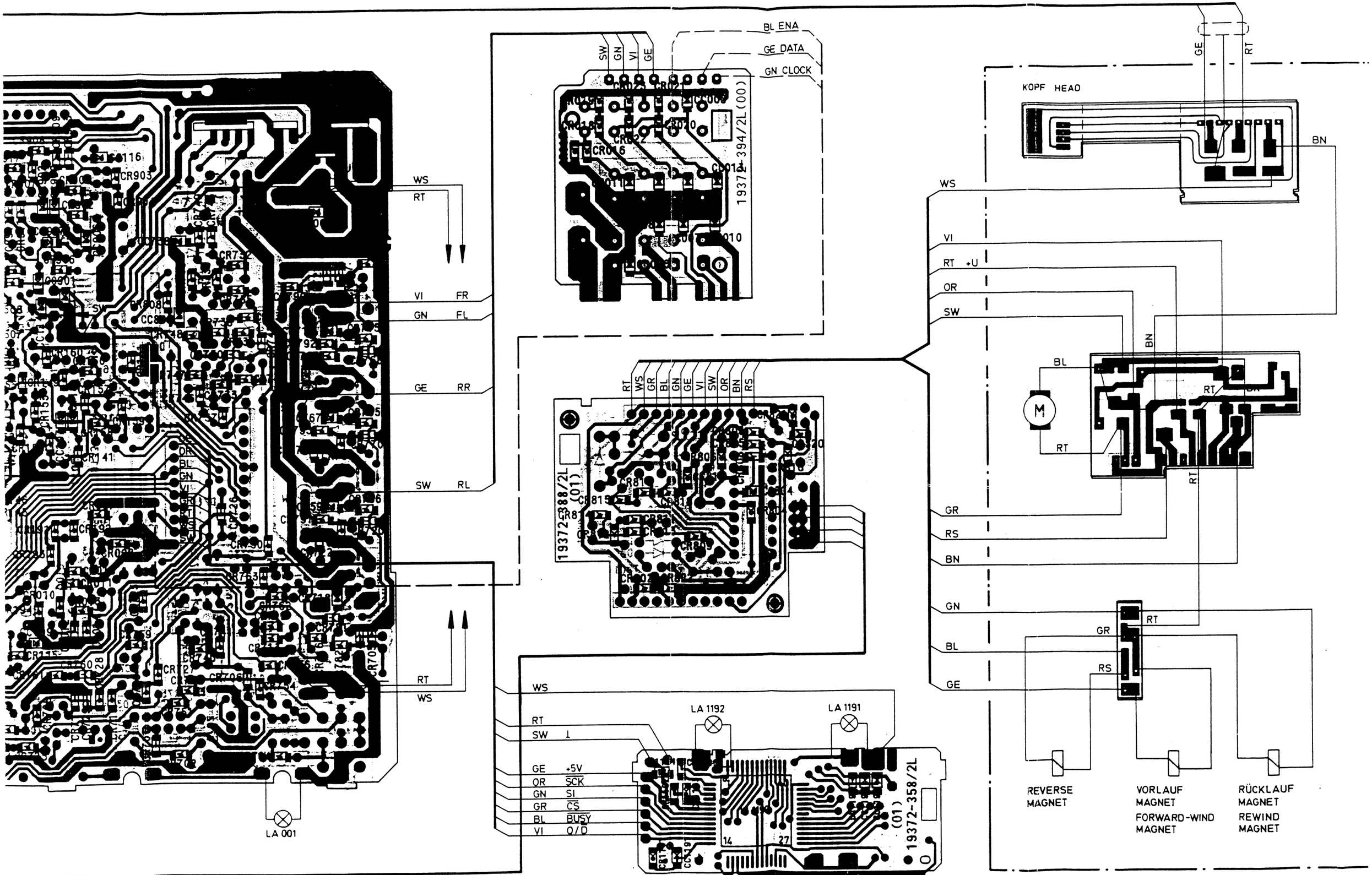
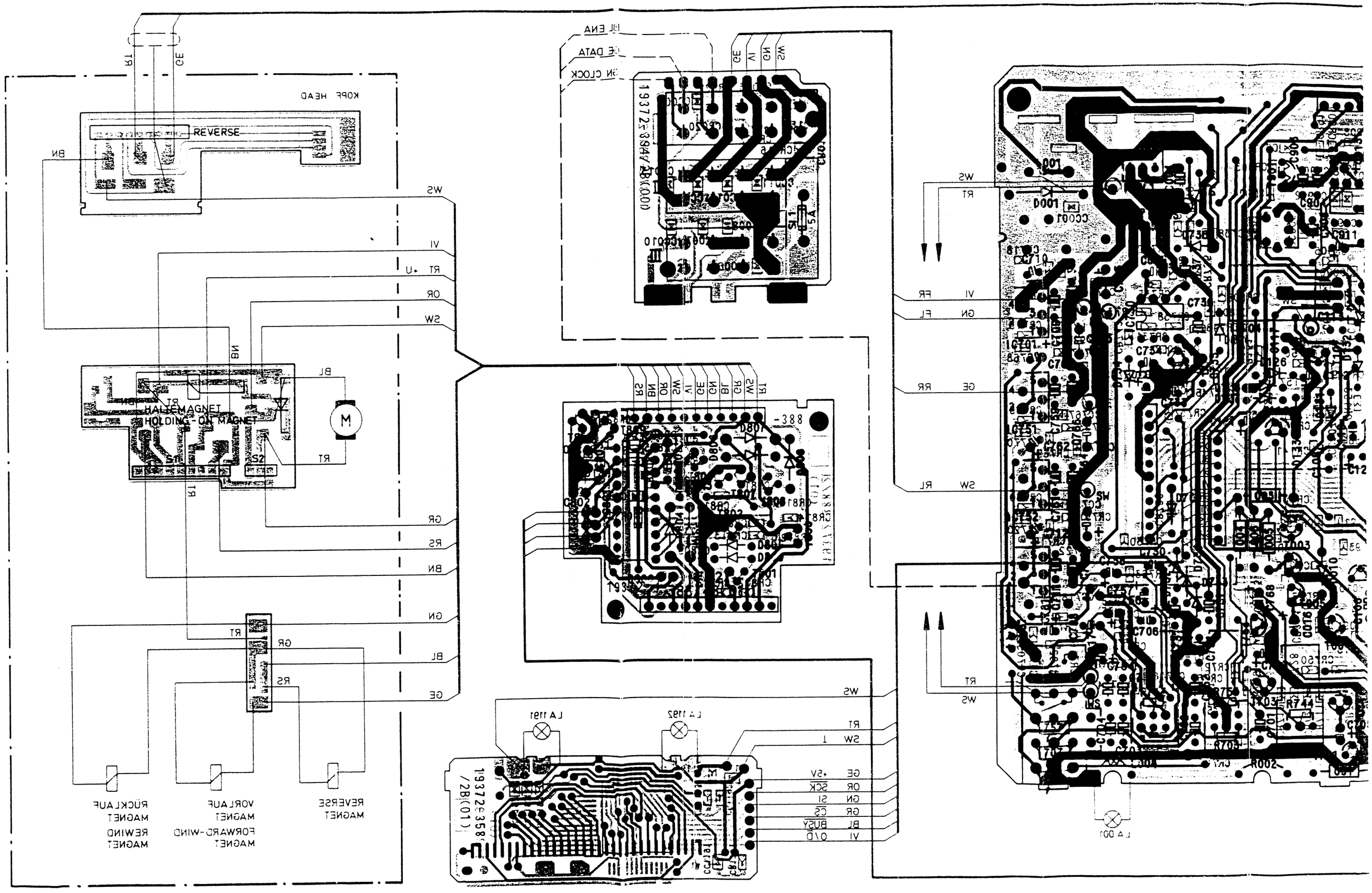
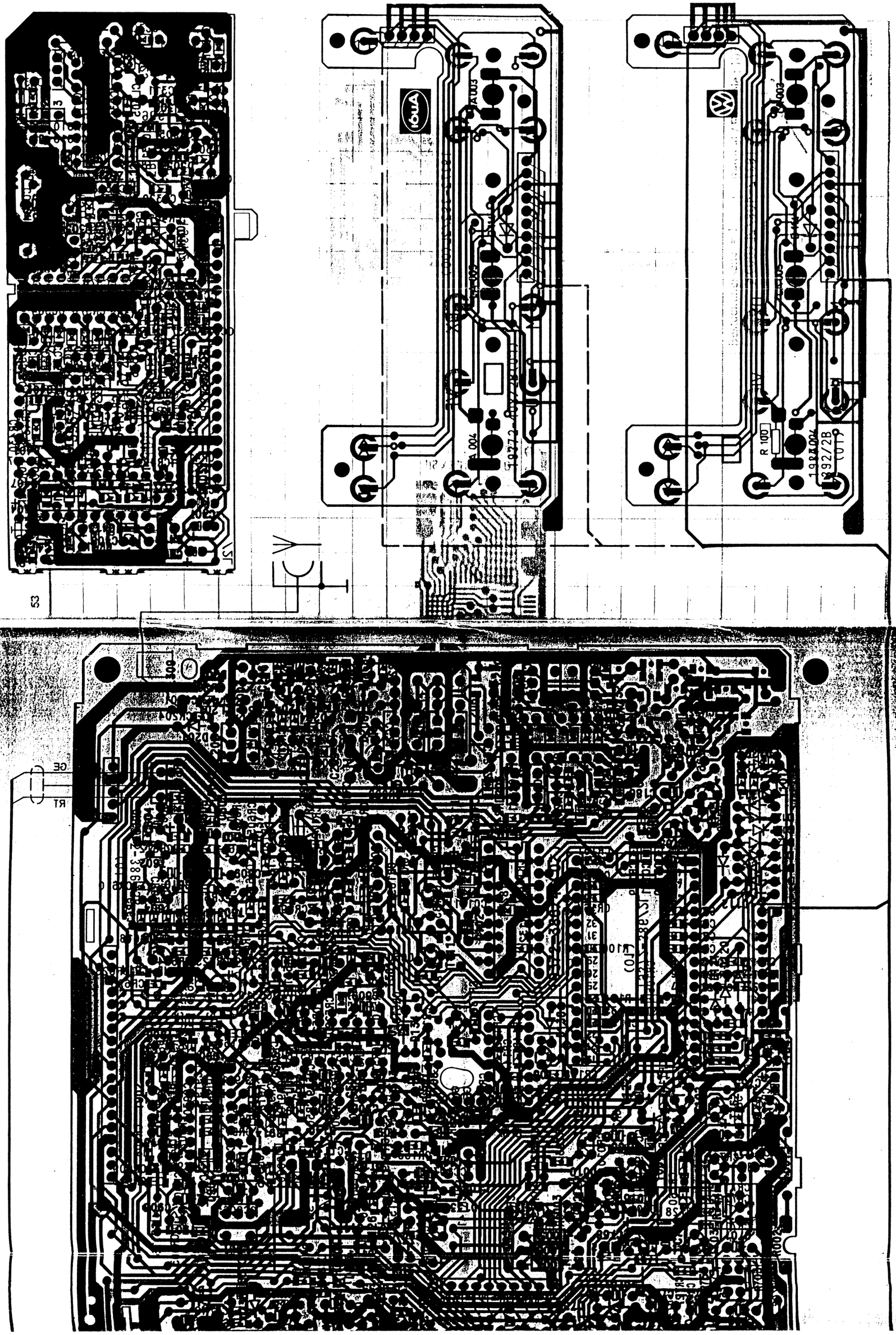

WS
RT
VI FR
GN FL
GE RR
SW RL
RT
WS
LA 001
BL ENA
GE DATA
GN CLOCK
SW GN VI GE
19372-394/2L(00)
RT WS GR BL GN GE VI SW OR BN RS
19372-388/2L (01)
WS
RT
SW 1
GE +5V
OR SCK
GN SI
GR CS
BL BUSY
VI Q/D
LA 1192
LA 1191
19372-358/2L (01)
GE
RT
KOPF HEAD
BN
WS
VI
RT +U
OR
SW
BN
BL
M
RT
RT
RT
GR
RS
BN
GN
BL
GE
RT
GR
RS
REVERSE MAGNET
VORLAUF MAGNET
FORWARD-WIND MAGNET
RÜCKLAUF MAGNET
REWIND MAGNET
LÖTSEITE
SOLDER SIDE



BESTÜCKUNGSSEITE
COMPONENT SIDE


53
TCV
R 100
1984004
392/2B
R1

ELEKTRISCHER TEIL

ELECTRICAL SECTION

Kontrolle der Bandgeschwindigkeit
(4,76 cm/sec. ± 2%)
- Testbandcassette 449 (3150 Hz)Sachnr. 35079-019.00 abspielen
- Frequenzzähler an Lautsprecherausgang

Checking of Tape Speed
(4,76 cm/sec. ± 2%)
- Play back tape test cassette 449 (3150 Hz) Order No.35079-019.00
- Connect frequency counter to loudspeaker output.

ZF - Einstellung nach Keramikfiltergruppen

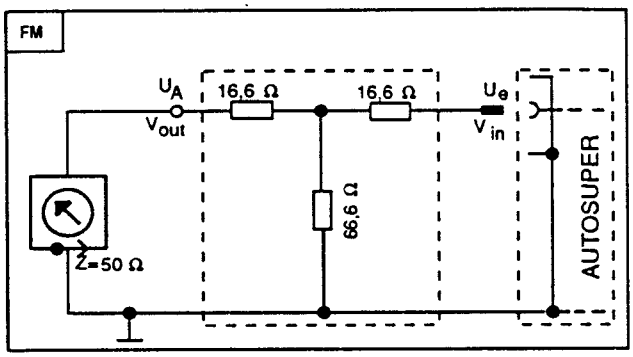
In einem Gerät nur Filter mit gleichen Farbpunkt verwenden.

IF - settings for ceramic filters groups

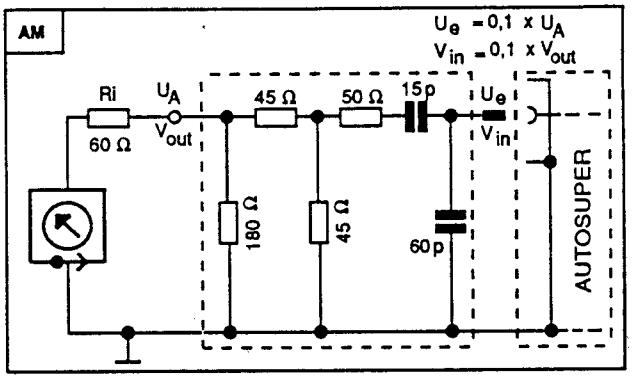
Only use filters of the same colour group in one unit.

FM - ZF	Keramik - Gruppe Ceramic - groups	B1 (D 123)	B2 (D 124)
10,675 MHz	B (blau) (blue)	auf open	X
10,700 MHz	A (rot) (red)	X	X
10,725 MHz	C (orange) (orange)	X	auf open

Zum Abgleich die Antennennachbildung verwenden



For adjustment use the aerial dummies



Zeichenerklärung		Legende
Meßsender Testgenerator		Frequenzzähler frequency counter
GF Wobbelgenerator Sweep generator		Gleichspg. Meßger. m. Mittelanzeige DC voltage meter with centre indicator
G VF VF-Coder Traffic flash coder		Gleichspg. Meßgerät DC voltage meter
G Stereocoder		NF-Voltmeter AF voltage meter
UFMZ 7 MGL Filter	Übersprechen Crosstalk	Tiefpaß Low pass filter
CCIR 468 Filter	Rauschabsenkung Noise cut	Digitalvoltmeter Digital voltage meter
Drehen nach rechts Tuning to right		Oszilloskop Oscilloscop

Abgleichtabelle Alignmenttable

Abgleich Alignment	Einspeisung Feeding	Messpunkt Testpoint	Hinweis Notes	Band	f	Abgleichpunkt Alignmentpoint	Einstellung Adjustment
Oszillator Oscillator		1		MW	513 kHz	L 208	1V ± 50 mV
					1611 kHz	C 232	8V ± 50 mV
				FM	87,5 MHz	L 303	1,7V ± 50 mV
					108 MHz	C 323	8V ± 50 mV
Vor - und Zwischen - kreis Aerial - band - pass cct.	fmod. = 1 kHz m = 0,3 Ue = <	11	L 206 verstimmen detune	MW			
					558 kHz	L 203	Max.
					1548 kHz	C 209	
					558 kHz	L 206	Max.
					1548 kHz	C 222	
	fmod. = 1 kHz Δf = 22,5 kHz Ue = <			FM	88 MHz	L 301	Max.
						L 302	
ZF IF	GF Ue = <	2	IC 201 7 2,7 K	MW	1548 kHz	L 205	Max. u. Sym.
		5	10 K	FM		L 307	Max. u. Sym.
	Ue = 1 mV	3 4				L 351	0 V ± 10 mV
STEREO 76 kHz	G Ue = 45 dBµV Monosig.	9	1,8 pF = 500 Hz Verstimmung/ detune	FM		R 423	75,5 kHz
Über - sprechen Cross - talk	Ue = 60 dBµV fmod = 1 kHz Δf = 22,5 kHz Kanal L mod.	10	R 368			R 426	Min.
M/S Überg. M/S transi - tion	Ue = 45 dBµV	UFMZ 7				R 368	23 dB ± 1 dB
	Ue = 35 dBµV						5 dB ± 2 dB

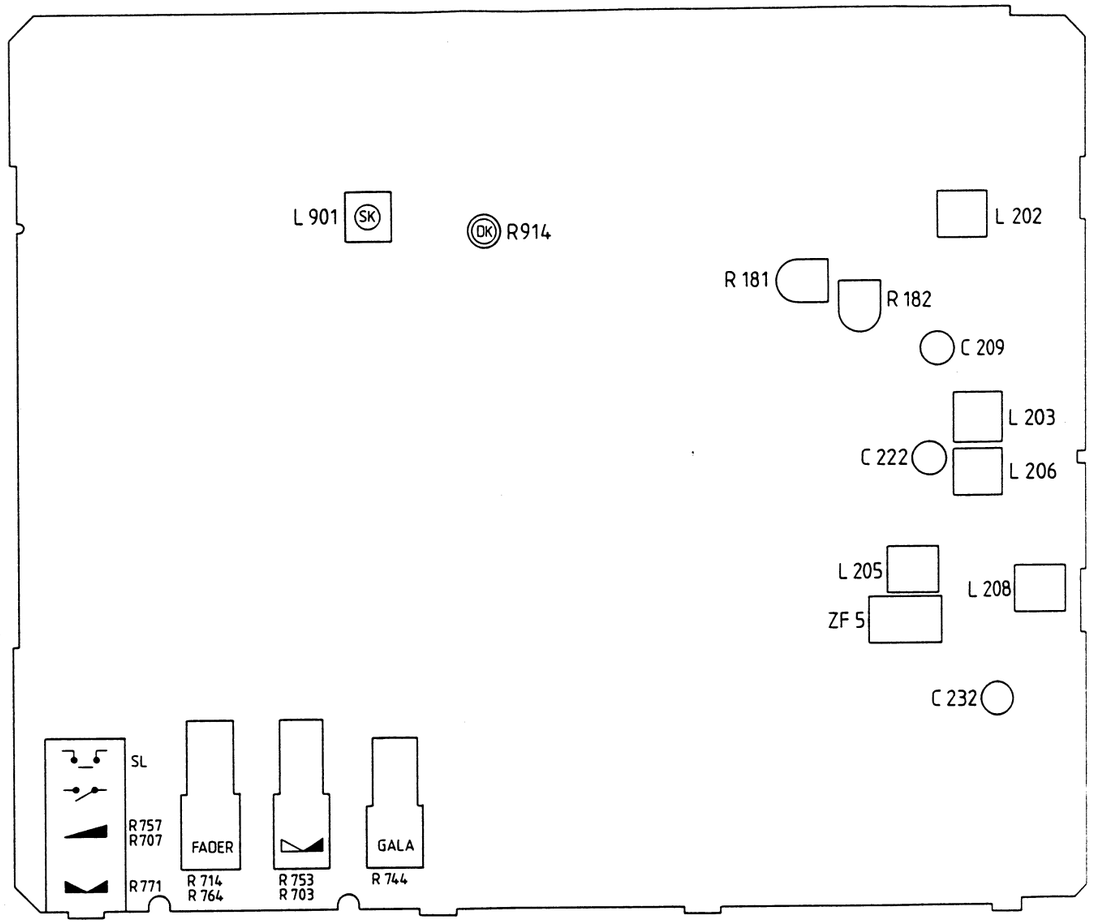
ichpunkt nentpoint	Einstellung Adjustment
:08	1V ± 50 mV
:32	8V ± 50 mV
)03	1,7V ± 50 mV
)23	8V ± 50 mV
203	Max.
:09	
206	Max.
222	
301	Max.
)02	
:05	Max. u. Sym.
307	Max. u. Sym.
351	0 V ± 10 mV
423	75,5 kHz
426	Min.
368	23 dB ± 1 dB
	5 dB ± 2 dB

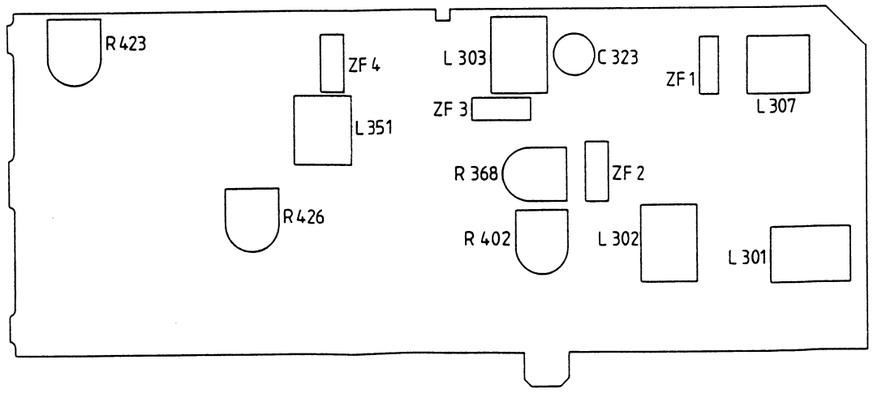
Abgleichtabelle Alignmenttable

Abgleich Alignment		Einspeisung Feeding	Messpunkt Testpoint	Hinweis Notes	Band	f	Abgleichpunkt Alignmentpoint	Einstellung Adjustment
Rausch-absenkung Noise cut		Ue = 60 dBµV Δf = 22,5 kHz	11 CCIR 468			94 MHz		0 dB
		Ue = 0 dBµV					R 402	26 dB ± 1 dB
Suchlauf Selfseek		Ue = 49 dBµV ± 4 dBµV	LOC		MW		R 181	stop
		Ue = 30 dBµV ± 4 dBµV	DX	Kontrolle control LOC / DX				Difference LOC / DX > 20 dB
		Ue = 45 dBµV	4 3		FM		L 351	< 10 mV
		Ue = 43 dBµV ± 3 dBµV	LOC				R 182	stop
		Ue = 18 dBµV ± 6 dBµV	DX	Kontrolle control LOC / DX				Difference LOC / DX > 20 dB
VF-DECODER	SK	G VF Ue = 40 dBµV 57 kHz/Δf = 1 kHz BK = 23,75..53,98 Hz	6 7	Erdfrei earth - free	FM		L 901 (SK)	Max.
	DK	DK = 125 Hz m = 0,25	8				R 914 (DK)	Max.

60 dBµV = 1 mV	24 dBµV = 16 µV
46 dBµV = 200 µV	20 dBµV = 10 µV
45 dBµV = 178 µV	18 dBµV = 8 µV
40 dBµV = 100 µV	12 dBµV = 4 µV
35 dBµV = 56 µV	

Abgleich-Lageplan Alignment Layout





FM-MISCHTEIL/FM MIXER SECTION/PARTIE MELANGEUR FM/SEZIONE MISCELATRICE FM

FM-MISCHTEIL-PLATTE
FM MIXING UNIT BOARD
C.I. DE MELANGEUR FM
PIASTRA DI SEZIONE MESCOLATRICE FM

19372-089.00

• ANFANG DER SPULE
BEGINNING OF SPOOL
DEBUL BOBINE
INZIO BOBINA

FM-ZF
FM-IF
FI-FM

IC301 U4062B 8305-314-040

IC351 TDA 1576 8305-302-215

IC402 TDA2320A 8305-342-320

IC201 TDA1072A 8385-183-597

AM-TEIL
AM SECTION
PARTIE AM
SEZIONE AM

WELLENBEREICHE: FM 87,5...108,0 MHZ
WAVEBANDS: MW,PO,GM 510...1620 KHZ
GAMMES D'ONDES:
GAMME D'ONDA:

HF-NF PLATTE
RF-AF BOARD
C.I. AF-RF
PIASTRA AF-BF

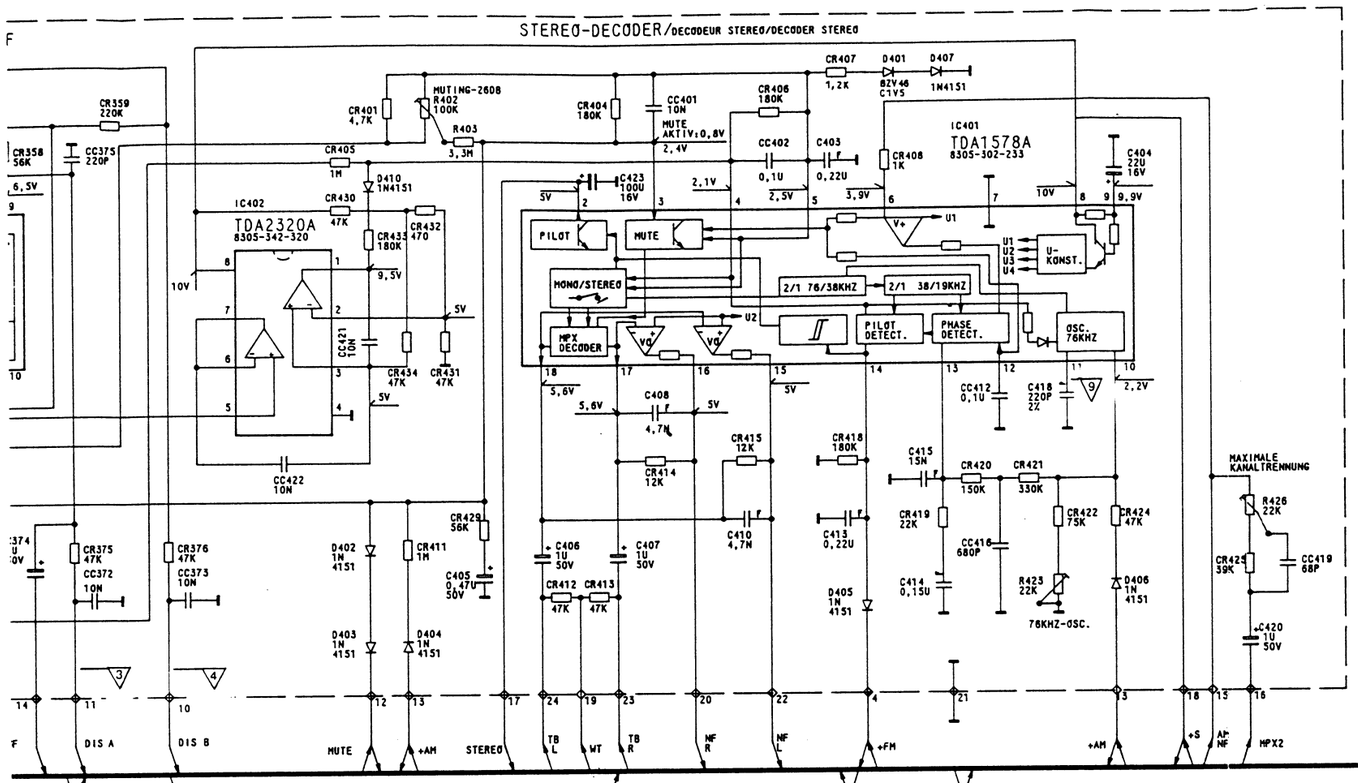
19372-084.00 BEI VW
19372-097.00 BEI AUDI

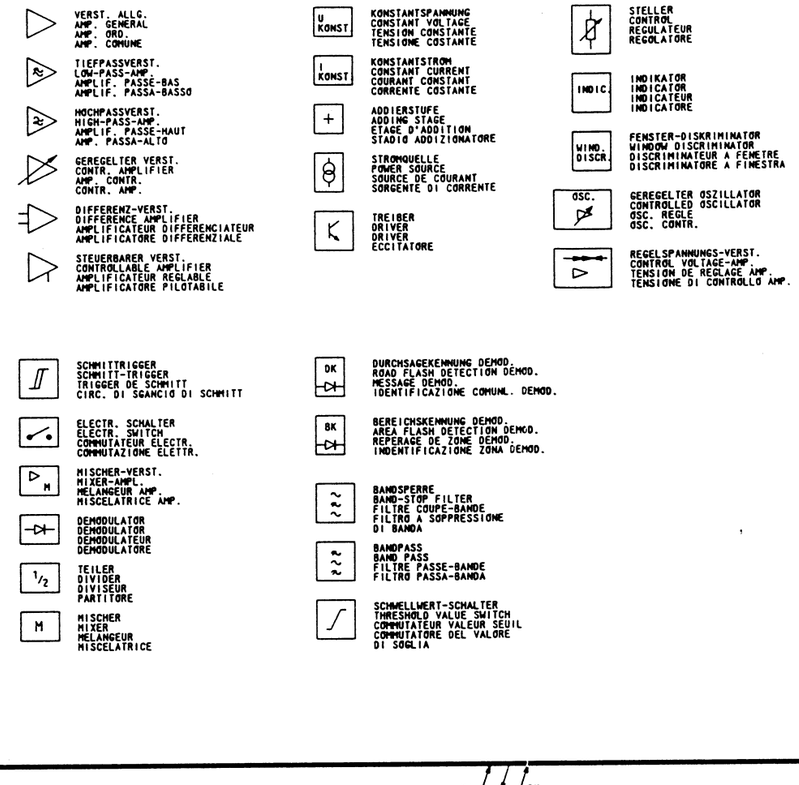
•C218	500PF	520PF	540PF
GRUPPE	I	II	III
D203-D205	BL	GN	RT

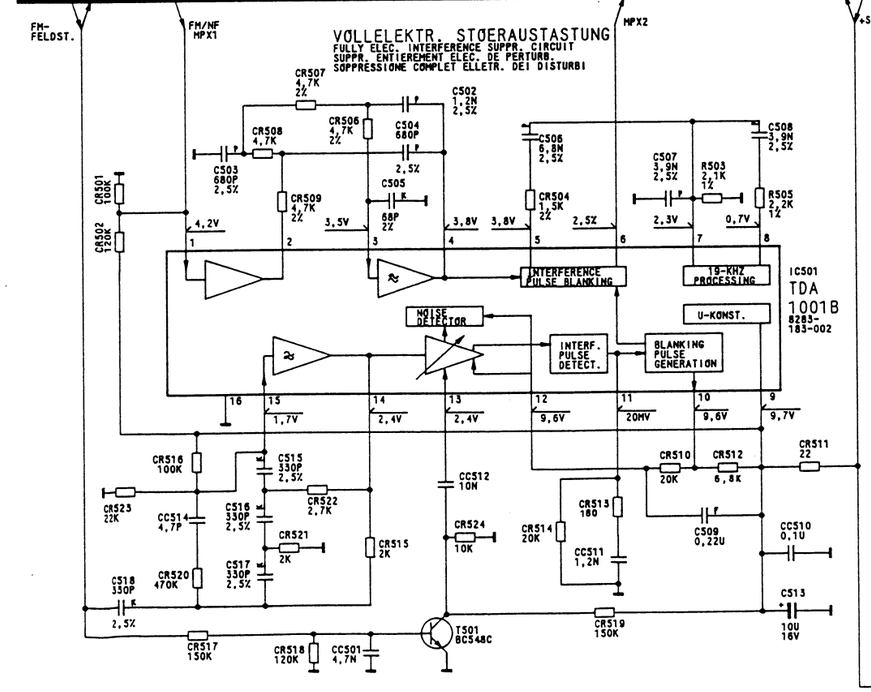
MESSPUNKTE
MEASURING POINTS

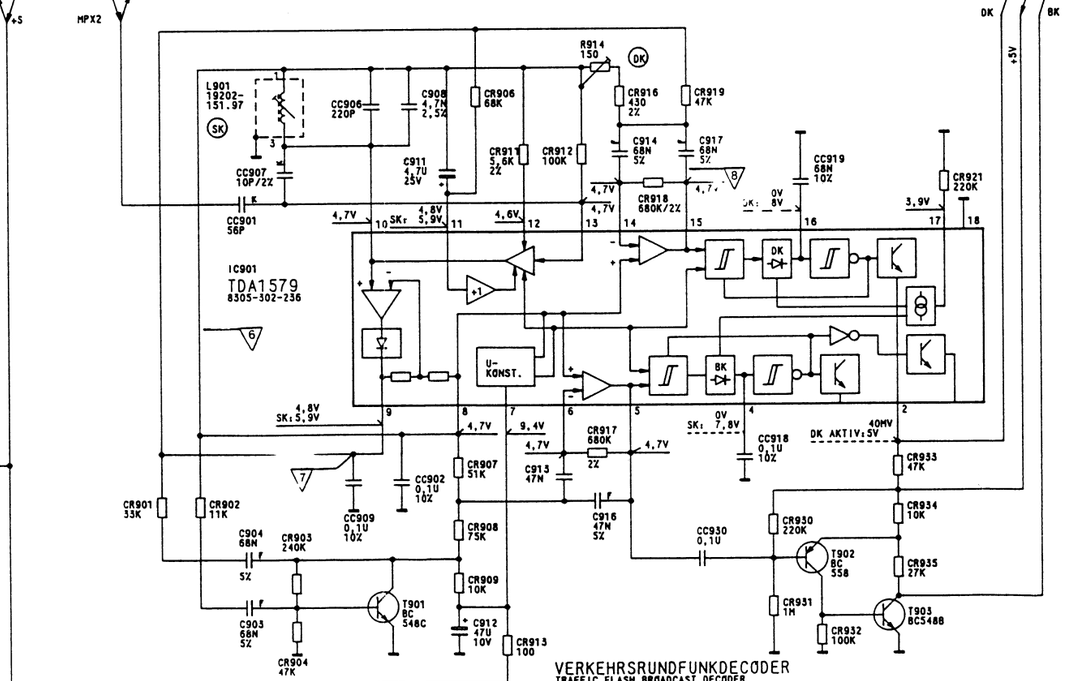
ABGLEICHPUNKTE
ALIGNMENT POINTS

71000-071.A01001


STEREO-DECODER/DECODEUR STEREO/DECODER STEREO
IC402
TDA2320A
8305-342-320
IC401
TDA1578A
8305-302-233
PILOT
MUTE
MONO/STEREO
2/1 76/38KHZ
2/1 38/19KHZ
MPX DECODER
PILOT DETECT.
PHASE DETECT.
OSC. 76KHZ
U-KONST.
MUTING-2608
MUTE AKTIV:0,8V
MAXIMALE KANALTRENNUNG
76KHZ-OSC.
DIS A
DIS B
MUTE
+AM
STEREO
TB L
WT
TB R
NF R
NF L
+FM
+S
NF
MPX2


VERST. ALLG.
AMP. GENERAL
AMP. GRD.
AMP. COMUNE
TIEFPASSVERST.
LOW-PASS-AMP.
AMPLIF. PASSE-BAS
AMPLIF. PASSA-BASSO
HOCHPASSVERST.
HIGH-PASS-AMP.
AMPLIF. PASSE-HAUT
AMP. PASSA-ALTO
GEREGELTER VERST.
CONTR. AMPLIFIER
AMP. CONTR.
CONTR. AMP.
DIFFERENZ-VERST.
DIFFERENCE AMPLIFIER
AMPLIFICATEUR DIFFERENCIATEUR
AMPLIFICATORE DIFFERENZIALE
STEUERBARER VERST.
CONTROLLABLE AMPLIFIER
AMPLIFICATEUR REGLABLE
AMPLIFICATORE PILOTABILE
KONSTANTSPANNUNG
CONSTANT VOLTAGE
TENSION CONSTANTE
TENSIONE COSTANTE
KONSTANTSTROM
CONSTANT CURRENT
COURANT CONSTANT
CORRENTE COSTANTE
ADDIERSTUFE
ADDING STAGE
ETAGE D'ADDITION
STADIO ADDIZIONATORE
STROMQUELLE
POWER SOURCE
SOURCE DE COURANT
SORGENTE DI CORRENTE
TREIBER
DRIVER
DRIVER
ECCITATORE
STELLER
CONTROL
REGULATEUR
REGOLATORE
INDIKATOR
INDICATOR
INDICATEUR
INDICATORE
FENSTER-DISKRIMINATOR
WINDOW DISCRIMINATOR
DISCRIMINATEUR A FENETRE
DISCRIMINATORE A FINESTRA
GEREGELTER OSZILLATOR
CONTROLLED OSCILLATOR
OSC. REGLE
OSC. CONTR.
REGELSPANNUNGS-VERST.
CONTROL VOLTAGE-AMP.
TENSION DE REGLAGE AMP.
TENSIONE DI CONTROLLO AMP.
SCHMITTTRIGGER
SCHMITT-TRIGGER
TRIGGER DE SCHMITT
CIRC. DI SGANCIO DI SCHMITT
ELECTR. SCHALTER
ELECTR. SWITCH
COMMUTATEUR ELECTR.
COMMUTAZIONE ELETTR.
MISCHER-VERST.
MIXER-AMPL.
MELANGEUR AMP.
MISCELATRICE AMP.
DEMODULATOR
DEMODULATOR
DEMODULATEUR
DEMODULATORE
TEILER
DIVIDER
DIVISEUR
PARTITORE
MISCHER
MIXER
MELANGEUR
MISCELATRICE
DURCHSAGEKENNUNG DEMOD.
ROAD FLASH DETECTION DEMOD.
MESSAGE DEMOD.
IDENTIFICAZIONE COMUNL. DEMOD.
BEREICHSKENNUNG DEMOD.
AREA FLASH DETECTION DEMOD.
REPERAGE DE ZONE DEMOD.
INDENTIFICAZIONE ZONA DEMOD.
BANDSPERRE
BAND-STOP FILTER
FILTRE COUPE-BANDE
FILTRO A SOPPRESSIONE DI BANDA
BANDPASS
BAND PASS
FILTRE PASSE-BANDE
FILTRO PASSA-BANDA
SCHWELLWERT-SCHALTER
THRESHOLD VALUE SWITCH
COMMUTATEUR VALEUR SEUIL
COMMUTATORE DEL VALORE DI SOGLIA


VOLLELEKTR. STØERAUSTASTUNG
FULLY ELEC. INTERFERENCE SUPPR. CIRCUIT
SUPPR. ENTIEREMENT ELEC. DE PERTURB.
SOPPRESSIONE COMPLET ELETTR. DEI DISTURBI
IC501
TDA 1001B
8283-183-002
INTERFERENCE PULSE BLANKING
19-KHZ PROCESSING
NOISE DETECTOR
INTERF. PULSE DETECT.
BLANKING PULSE GENERATION
U-KONST.
T501 BC548C


IC901
TDA1579
8305-302-236
U-KONST.
T901 BC 548C
T902 BC 558
T903 BC548B
VERKEHRSRUNDFUNKDECODER
TRAFFIC FLASH BROADCAST DECODER
DECODEUR RADIO-GUIDAGE
DECODER DI RADIO TRAFFICO

Gamma BL.1

LCD-BAUSTEIN / LCD MODUL 19720-193.00 BEI VW
MODULE LCD / MODULO LCD -194.00 BEI AUDI

19720-183.00 BEI VW
-184.00 BEI AUDI

LCD-PLATTE
LCD BOARD
C.L. LCD
PIASTRA LCD
19372-042.00

IC 1190
UPD 7225 G-00
8305-275-725
MOS

CC 1191 47N
CR 1191 100K
CR 1192 68K
CC 1192 0,1U
CR 1193 47K
CC 1193 0,1U
CR 1194 47K
CC 1194 0,1U
CR 1196 150K

BEI VW GESCHLOSSEN
LA1191
LA1192
2 X 5V 60MA BEI VW 115MA BEI AU

SCK SI CS BUSY C/D
UPD MODUL

DISPL. BEL.
AUDI BEL
+5V

IC 103
SDA 2120
8305-158-320

T111 BC328/25
T112 BC328/25
CR184 100K
CR185 100K
F REF
PHASE-DETEKTOR
20-BIT-SHIFT-REGISTER
20-BIT-LATCH
MSB SB0 SB1 LSB
Q102 4MHZ
8382-241-493
CC180 18P
4MHZ :2
:M
:S
BAND-SEL. MUX
MULT.
CC182 0,1U
CC181 2,2N
CC183 100P
US M/L
KW FM
:P/P+1 64/65
GND
C185 1U
C186 0,15U
CR189 15K
CR188 220K
T113 BC 550 C
T114 BC550 C
CR190 8,2K
CR185 180
CR186 1,5K
C184 47U 16V
CR191 39
T115 BC338/25
CR192 39
CR194 620
CR193 390
6,2V
CR187 820
1,7-8V
AM-ABST.SPG
FM-ABST.SPG.
5,5V
+S
UPD MODUL
10V
AM OSZ.
FM OSZ.

RESTLAUTST.
TB-STOP
WI
REV.ANZ.
REVERSE
RUECKL.
VORL.
MASSE
BEDIENF. BEL.
BEDIENPLATTE
CONTROL BOARD
C.L COMMANDES
PIASTRA COMMANDI
19372-087.00 BEI VW
-099.00 BEI AUDI

DIODENBRUECKEN	
B/D	TEST
B1	10,725 MHZ
B2	10,675 MHZ
B3	VW
B3	AUDI
B1	10,7 MHZ
B2	10,7 MHZ

LA003 R100 30 Ω LA004 LA005
3X 5V/115MA
NUR BEI VW
13 X 1N4151
4X 220K
CR119 CR118 CR117 CR116 CR105 3,3K
D112 D113 D114 1N4151 D115 D116
CR120 8,2K
CR121 8,2K
CR122 8,2K
M+ M- MW VF U DX
D111 D118 D121 D120 D119 D125 D124 D123 D122
CR124 1K
CR123 6,8K
CR126 10K
CR125 4,7K
CC116 10N
CR128 33K
CR127 15K
TB-STOP AKTIV: 0V 0,7V
T104 BC548 C
D129 1N4151
CR112 68K
T101 BC558 C
CC110 220P
CR110 150K
SL (AM POT.)
D117 1N4151
CR114 68K
T102 BC558 C
CC109 10N
CR115 180K

IC 101
UPD 7508 HG-577-22
8305 275-518
MOS

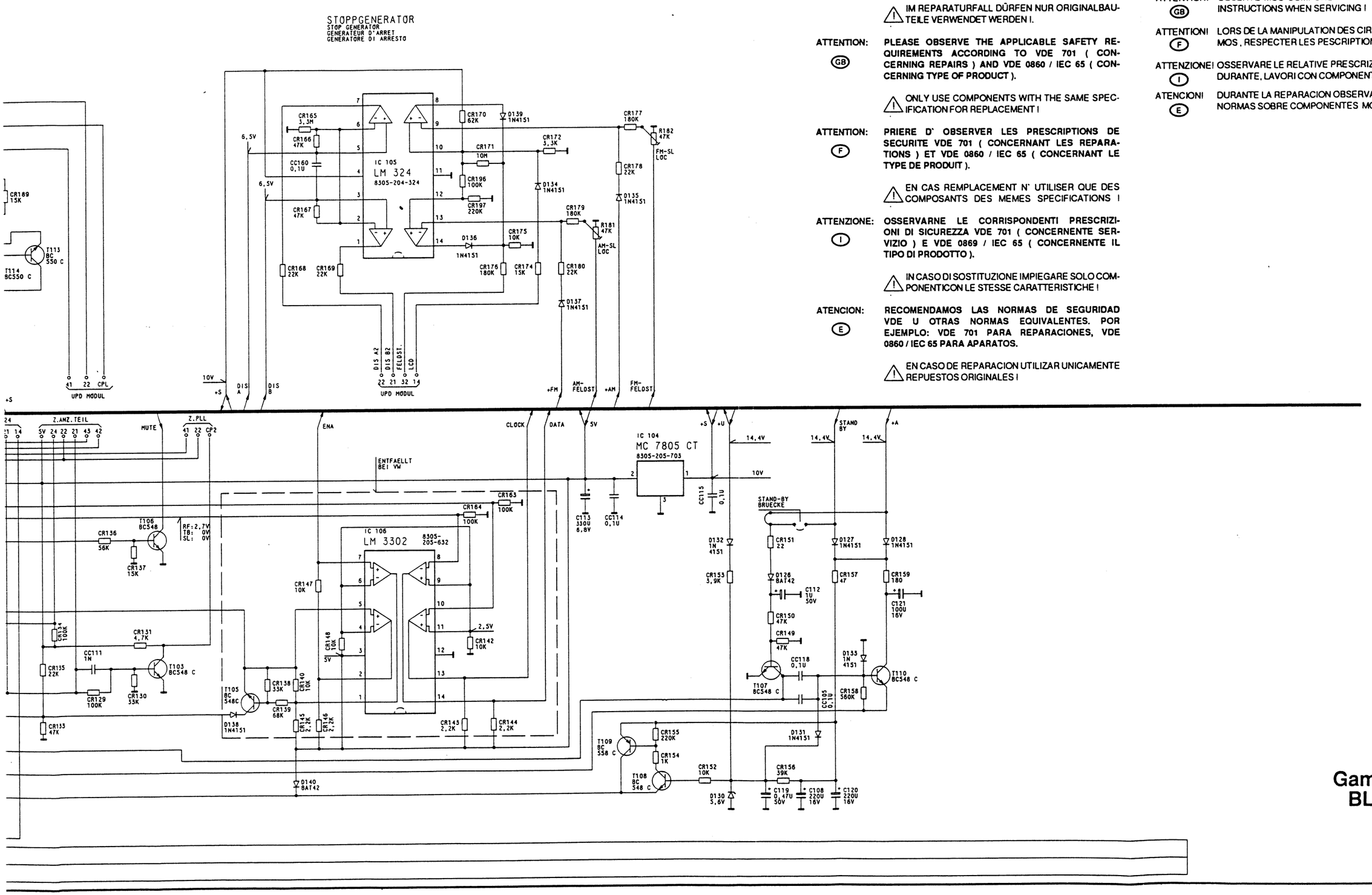
IC 102
NMC 9306 EN
8305-311-307
MOS

R104 47K
CR103 4,7K
CR102 33K
D101 1N4151
CR101 180K
CC101 0,1U
CC102 0,1U
CC103 0,1U
Q101 4 MHZ 8602-331-085
CC106 15P
CC104 15P
CC105 15P
CC107 15P
CR107 10
5,3V
C106 0,22U
C122 1U 50V
C117 100U 10V
CR141 91K
CR160 9,1K

OK BK STEREO TB LAEUFT
Z.LM324
Z.ANZ.TEIL
Z.PLL
MUTE
CR161 100K
CR162 10K
CR136 56K
T106 BC548
CR137 15K
RF: 2,7V
TB: 0V
SL: 0V
CR134 100K
CR131 4,7K
CC111 1N
T103 BC548 C
CR135 22K
CR129 100K
CR130 33K
R132 120K
CR133 47K
CR156 100K

MESSPUNKTE
MEASURING POINTS
ABGLEICHPUNKTE
ALIGNMENT POINTS

71000-071.80(00)



ACHTUNG: (D)

BEI EINGRIFFEN INS GERÄT SIND DIE SICHERHEITSVORSCHRIFTEN NACH VDE 701 (REPARATURBEZOGEN) BZW. VDE 0860 / IEC 65 (GERÄTEBEZOGEN) ZU BEACHTEN.

⚠ IM REPARATURFALL DÜRFEN NUR ORIGINALBAUTEILE VERWENDET WERDEN !.

ATTENTION: (GB)

PLEASE OBSERVE THE APPLICABLE SAFETY REQUIREMENTS ACCORDING TO VDE 701 (CONCERNING REPAIRS) AND VDE 0860 / IEC 65 (CONCERNING TYPE OF PRODUCT).

⚠ ONLY USE COMPONENTS WITH THE SAME SPECIFICATION FOR REPLACEMENT !

ATTENTION: (F)

PRIERE D' OBSERVER LES PRESCRIPTIONS DE SECURITE VDE 701 (CONCERNANT LES REPARATIONS) ET VDE 0860 / IEC 65 (CONCERNANT LE TYPE DE PRODUIT).

⚠ EN CAS REMPLACEMENT N' UTILISER QUE DES COMPOSANTS DES MEMES SPECIFICATIONS !

ATTENZIONE: (I)

OSSERVARNE LE CORRISPONDENTI PRESCRIZIONI DI SICUREZZA VDE 701 (CONCERNENTE SERVIZIO) E VDE 0869 / IEC 65 (CONCERNENTE IL TIPO DI PRODOTTO).

⚠ IN CASO DI SOSTITUZIONE IMPIEGARE SOLO COMPONENTICON LE STESSE CARATTERISTICHE !

ATENCION: (E)

RECOMENDAMOS LAS NORMAS DE SEGURIDAD VDE U OTRAS NORMAS EQUIVALENTES. POR EJEMPLO: VDE 701 PARA REPARACIONES, VDE 0860 / IEC 65 PARA APARATOS.

⚠ EN CASO DE REPARACION UTILIZAR UNICAMENTE REPUESTOS ORIGINALES !

ACHTUNG! (D) VORSCHRIFTEN BEIM UMGANG MIT MOS - BAUTEILEN BEACHTEN !

ATTENTION! (GB) OBSERVE MOS COMPONENTS HANDLING INSTRUCTIONS WHEN SERVICING !

ATTENTION! (F) LORS DE LA MANIPULATION DES CIRCUITS MOS , RESPECTER LES PESCRIPTIONS MOS !

ATTENZIONE! (I) OSSERVARE LE RELATIVE PRESCRIZIONI DURANTE, LAVORI CON COMPONENTI MOS !

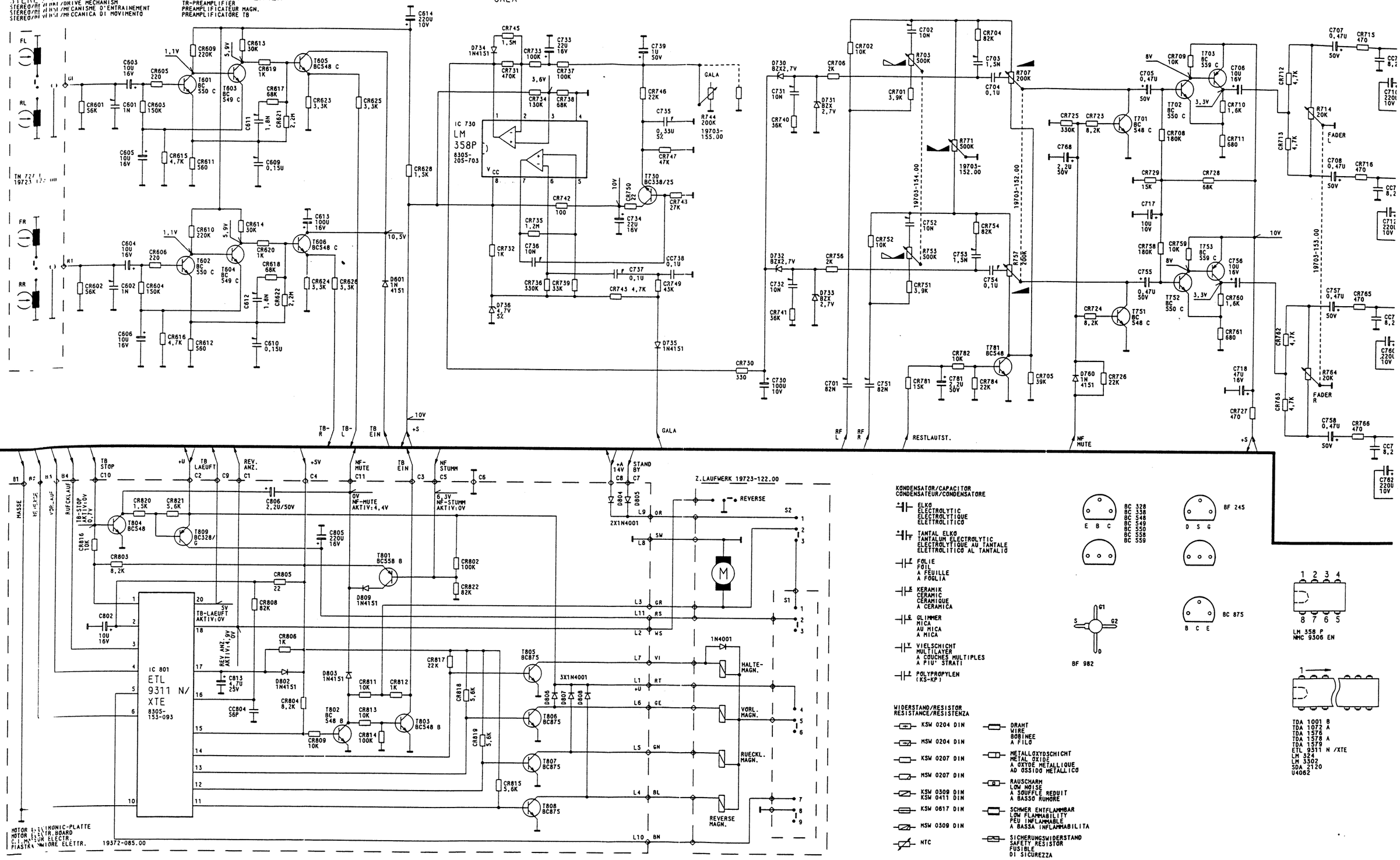
ATENCION! (E) DURANTE LA REPARACION OBSERVAR LAS NORMAS SOBRE COMPONENTES MOS !

Gamma BL.2

STEREO INVERSE-LAUFWERK
STEREO/REVERSE/DRIVE MECHANISM
STEREO/INVERSE/MECANISME D'ENTRAINEMENT
STEREO/INVERSE/MECCANICA DI MOVIMENTO

TB-VORVERSTAERKER
TB-PREAMPLIFIER
PREAMPLIFICATEUR MAGN.
PREAMPLIFICATORE TB

GALA



KONDENSATOR/CAPACITOR
CONDENSATEUR/CONDENSATORE

- ELKO / ELECTROLYTIC / ELECTROLYTIQUE / ELETTROLITICO
- TANTAL ELKO / TANTALUM ELECTROLYTIC / ELECTROLYTIQUE AU TANTALE / ELETTROLITICO AL TANTALIO
- FOLIE / FOIL / A FEUILLE / A FOGLIA
- KERAMIK / CERAMIC / CERAMIQUE / CERAMICA
- GLIMMER / MICA / AU MICA / A MICA
- VIELSCHICHT / MULTILAYER / A COUCHES MULTIPLES / A PIU' STRATI
- POLYPROPYLEN (KS-KP)

WIDERSTAND/RESISTOR
RESISTANCE/RESISTENZA

- KSW 0204 DIN
- MSW 0204 DIN
- KSW 0207 DIN
- MSW 0207 DIN
- KSW 0309 DIN / KSW 0411 DIN
- KSW 0617 DIN
- MSW 0309 DIN
- NTC
- DRAHT / WIRE / BOBINEE / A FILO
- METALLOXYDSCHICHT / METAL OXIDE / A OXYDE METALLIQUE / AD OSSIDO METALLICO
- RAUSCHARM / LOW NOISE / A SOUFFLE REDUIT / A BASSO RUMORE
- SCHWER ENTFLAMMBAR / LOW FLAMMABILITY / PEU INFLAMMABLE / A BASSA INFIAMMABILITA
- SICHERUNGSWIDERSTAND / SAFETY RESISTOR / FUSIBLE / DI SICUREZZA

AENDERUNGEN VORBEHALTEN
SUBJECT TO ALTERATION
MODIFICATIONS RESERVEES
CON RISERVA DI MODIFICA

IC 701 TDA2003 8383-141-897
IC 702 TDA2003 8383-141-897
IC 751 TDA2003 8383-141-897
IC 752 TDA2003 8383-141-897
IC 001 L4810CV 8305-204-480

L - LINKER KANAL / LEFT CHANNEL / CANAL DE GAUCHE / CANALE SINISTRO
R - RECHTER KANAL / RIGHT CHANNEL / CANAL DE DROITE / CANALE DESTRO

FADER L
FADER R

GALA
NF-STUMM
STAND-BY
DISPL. BEL.
BEI AU GESCHLOSSEN
AUDI BEL. VOM LCD-BAUSTEIN
BEDIENF. BEL.
+U
+14V UNGESCH. +A
+S
DATA
CLOCK
ENA

GALA
GALA MASSE / GALA EARTH / TERRE GALA / TERRA GALA
NF-STUMM / AF MUTED / SILENCIEUX BF / SILENZIATO BF
STAND-BY
GESCHALTETE + (AKTIV LAUTSPRECHER) / SWITCHED + / MORS. + / SPENTO +
AUTOMATIK ANTENNE / AUTOMATIC AERIAL / ANTENNE AUTOM. / ANTENNA AUTOM.
BELEUCHTUNG / ILLUMINATION / ILLUMINAZIONE
MASSE / EARTH / TERRE / TERRA
+14,4V
DATA
CLOCK
ENA
ENTFAELLT BEI VW

ANSCHLUSSPLATTE / CONNECTING BOARD / PLAQUE DE BRANCHEMENT / PIASTRA DI COLLEGAMENTO
19372-088.00

SW=SCHWARZ / BLACK / NOIR / NERO
BN=BRAUN / BROWN / BRUN / MARRONE
RT=ROT / RED / ROUGE / ROSSO
GE=GELB / YELLOW / JAUNE / GIALLO
GN=GRUEN / GREEN / VERT / VERDE
BL=BLAU / BLUE / BLEU / BLU
VI=VIOLETT / VIOLET / VIOLET / VIOLETTO
GR=GRAU / GREY / GRIS / GRIGIO
WS=WEISS / WHITE / BLANC / BIANCO
RS=ROSA / PINK / ROSE / ROSA
OR=ORANGE / ORANGE / ORANGE / ARANCIONE
TR=TRANSPARENT / TRANSPARENT / TRANSPARENT / TRASPARENTE

ALLE SPANNUNGEN GEMESSEN BEI U_B= 14V GEGEN MINUS
ALL VOLTAGES MEASURED AT U_B= 14V WITH RESPECT TO NEGATIVE
TOUTES LES TENSIONS SONT MESUREES POUR U_B= 14V AU MOINS
TUTTE LE TENSIONI MISURATE CON U_B= 14V VERSO IL NEGATIVO

OHNE SIGNAL / WITHOUT SIGNAL / SANS SIGNAL / SENZA SEGNALE
MIT SIGNAL / WITH SIGNAL / AVEC SIGNAL / CON SIGNALE

BF 245
BC 875
LM 358 P / NMC 9306 EN
L 4810 CV / MC 7805 CT
TDA 1001 B / TDA 1072 A / TDA 1576 / TDA 1578 A / TDA 1579 / ETL 9311 N /XTE / LM 324 / LM 3302 / SDA 2120 / U4062
TDA 2003
UPD 7225 G-00
UPD 7508 HG-577-22
07202-19202-
19203-008.96
19203-113.14
8140-530-250 / 8140-530-252 / 8140-530-255

FARBKENNZEICHNUNG VON FILTERN
COLOUR CODE FOR FILTERS
REPERAGE EN COULEUR DES FILTRES
CONTRASSEGNO COLORATO SUI FILTRI

KENNZEICHNUNG VON CHIP-BAUTEILEN
CODING OF CHIP-COMPONENTS
MARQUAGE DES COMPOSANTS CHIP
CONTRASSEGNO DI COMPONENTI CHIP

CC=KONDENSATOR/CAPACITOR/CONDENSATEUR/CONDENSATORE
CR=WIDERSTAND/RESISTOR/RESISTANCE/RESISTENZA
CD=DIODE/DIODO
CT=TRANSISTOR
CL=SPULE/COIL/BOBINE/BOBINA

Gamma BL.3